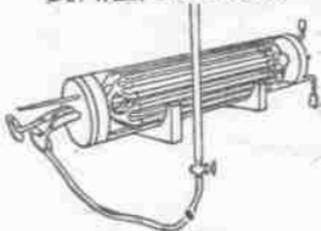


"ALL THE BLOOD IN THE BODY CAN BE PUMPED OUT AND CLEANED OF DISEASE GERMS"

Baltimore, Feb. 5.—That all of a human being's blood can be pumped out of the arteries, cleaned and pumped back into the body is claim-



Dr. Wm. H. Welch.



Sketch of the marvelous artificial kidney below Dr. Welch's picture shows the 32 tubes in which the blood is purified.

ed in an artificial kidney by learned doctors of John Hopkins University.

Yet it's an experience that may soon come to all of us, with the perfection of the marvelous new apparatus which has just been put out from

the pharmacological laboratory of John Hopkins University under the supervision of Dean William H. Welch, and which will probably solve some of the most vexing medical problems of the day. Kidney diseases are increasing with alarming rapidity. It is thought that the John Hopkins artificial kidney in many cases will be successfully used to perform the blood purifying function in which the diseased natural kidney fails.

The apparatus consists of 32 tubes contained in a glass case. The tubes, made of a substance called celloidin, are connected at one end with a single tube which may be attached to an artery, and at the other, with a tube which leads to a vein. Before the artificial kidney is attached to the body, the tubes are filled with a solution of salt and water.

When it is put in position, the heart pumps the blood out from the artery into the tubes and forces the salt solution back into the veins to take its place.

While in the tubes the blood is purified of its poisonous substances by dialysis—a process by which harmful substances contained in the blood seep through the delicate celloidin walls of the tubes into a fluid which is held in the outer space between the tubes and the glass case. By changing the composition of this fluid the physician can determine what substances shall pass into it by dialysis of the blood.

This astounding machine has been used with complete success on dogs and other animals. The three physicians who made it, Dr. John J. Abel, Dr. Leonard C. Rowntree and Dr. D. B. Turner, are now elaborating an artificial kidney which they expect will be used on humans with perfect safety, and will be invaluable for cleansing impure blood.

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Kansas has 275,000 women voters.